



East Grand Forks Water & Light Department

Life Connected Since 1909

WHAT IS A KWH?

You know your lights and television work, and you get a bill every month, but do you actually know how your electricity is measured?

It's fairly simple, really. Electricity is measured in units of power called watts. Like pennies, watts are pretty small. For most purposes, electricity is measured in kilowatts, or 1000-watt units. The watt or kilowatt rating on electric devices - such as light bulbs - tells you how much electricity it requires.

The higher the rating, the more electricity it uses.

The number of watts used is then multiplied by the number of hours of use, and the result is expressed in kilowatt-hours -- or kWh.

For example, one kWh is the amount of energy that is required to power one 100-watt light bulb for 10 hours.

$$\frac{100 \text{ watts} \times 10 \text{ hours}}{1000} = 1 \text{ kWh}$$

Likewise, one kWh is needed to burn ten 100-watt light bulbs for one hour.

$$\frac{1000 \text{ watts} \times 1 \text{ hour}}{1000} = 1 \text{ kWh}$$

